

None of the cited art shows a similar combination of features.

Lambuth (US 4413 459) discloses a composite I beam which in relation to Fig. 4 shows a pair of wooden flanges interconnected by a pair of spaced apart sidewalls forming a cavity.

The cavity is empty. Lambuth does not disclose that the central cavity is filled with corrugated cardboard/paper. This is agreed by the Examiner in para.23. of the Official Letter.

Lambuth does not disclose further disclose that the upper and lower flanges are formed of plywood. In Col 6 lines 3 to 7, it is stated that the flange members comprise either solid lumber or multiply veneers all having the veneer grain direction extending parallel with each other as in MICROLAM flanges. MICROLAM is further described in Col 1 lines 25 to 30.

As the Examiner will appreciate Plywood is a different material to MICROLAM. In plywood, adjacent veneers of wood are orientated cross-wise. This produces a dimensionally stable laminate of uniform strength.

The advantage of Plywood over laminated wood (MICROLAM) lies in the fact that MICROLAM is anisotropic (that is its physical properties are directional) whereas the plywood is substantially homogeneous so that beams made in accordance with the present invention are generally stiffer and stronger.

Grigsby (5681 641) does not disclose an I beam, but does disclose a cardboard billet or strut having a central cavity filled with corrugated cardboard adhered to the surrounding cavity walls. However the main objective of Grigsby is to replace wood (col 3 lines 9-11) with wood substitute member (col 4 lines 45-47).

We would submit that a man skilled in the art of wood composite beams would not readily review documents relating to wood substitutes.

We would submit that Grigsby and Lambuth are not documents that would be considered naturally in association. They are in totally different search classes both, International Classes B73B & E04C respectively and US Classes 428/182 and 52/729. Further we would submit that two documents are only linked by ex-post facto analysis of the present Invention which provides a wooden composite I beam having a web filled with corrugated paper core.

However, even if its is considered that Lambuth and Grigsby can be fairly combined, the present invention utilises plywood flanges. The use of this material is not disclosed in Lambuth or Grigsby. This material has been know since the 1940's and yet Lambuth in the 1980's does not disclose there possible use.

It is submitted that the invention as now Claimed in Claim 15 is both novel and inventive, providing an improved beam with good weight/strength characteristics, and which cannot be derived from a combination of any two cited documents.

Since we believe Claim 15 to be acceptable we submit that the objections raised against the dependant Claims should be withdrawn.

The drawings have been amended in enclosed Drawing Amendment "A to correct the matters objected to by the Examiner.

Having amended the specification, claims, abstract and drawings in accordance with the Examiners suggestions, it is now believed that the application is in condition for allowance and such action is respectfully requested. If the Examiner still feels that there are some minor matter which need to be resolve, Applicant's attorney would welcome a call from the Examiner at the below listed phone number.

Respectfully submitted,


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Encl

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Paul E Milliken

Signature *Paul E Milliken*